

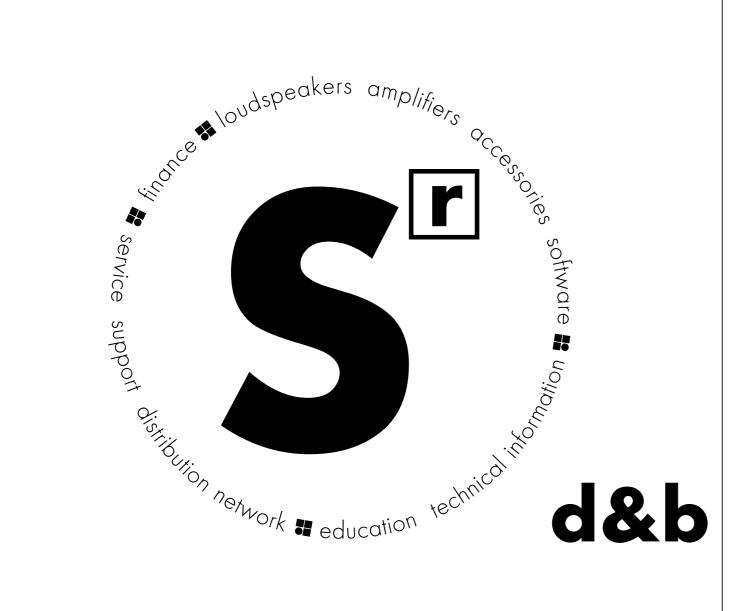
### **V-Series**



### Contents



The d&b System reality	4
The V-Series	6
The V7P loudspeaker and Vi7P loudspeaker	10
The V10P loudspeaker and Vi10P loudspeaker	11
The V-GSUB and Vi-GSUB	12
The V7P, V10P and V-GSUB transport accessories	13
The V8 loudspeaker and Vi8 loudspeaker	14
The V12 loudspeaker and Vi12 loudspeaker	15
The V subwoofer and Vi subwoofer	16
The Vi Weather Resistant, Special Colour and Custom solutions options	17
The V-Series mounting accessories and examples	18
The V-Series rigging accessories and examples	20
The V8, V12 and V Flying frame cases and carts	23
The d&b ArrayCalc simulation software	24
The d&b NoizCalc immission modelling software	26
The d&b R1 Remote control software	27
The d&b amplifiers	28
The controller setups and operation with d&b amplifers	30
The V-Series frequency responses	31
The d&b amplifier output modes	32
The DS10 and DS20 Audio network bridges	34
The DS100 Signal Engine	34
The V-Series configuration examples	35
The V-Series cables and adapters	42
The V-Series product overview	46



# d&b System reality

As the name implies a d&b audiotechnik system is not just a loudspeaker. Nor is it merely a sum of the components: loudspeakers, amplifiers, signal processors, networking, software and accessories. Right from the outset the d&b audiotechnik approach was to build integrated sound reinforcement systems

that actually are more than the combination of parts: an entirety where each fits all. Every element is tightly specified, precisely aligned and carefully matched to achieve maximum efficiency. For ease of use, all the user-definable parameters are incorporated, allowing the possibility of adjustment, either

directly, via remote control surfaces, or integrated within wider networks. Neutral sound characteristics leave the user all the freedom needed to realize whatever the brief. At the same time d&b offers finance, service and support, a knowledgeable distribution network, education and training as well as technical

information, so the same optimal acoustic result is achieved consistently by every system anywhere, at any time. In reality: the d&b System reality.









The **V-Series** comprises both line array solutions and point source systems; both offer minimal size and weight in combination with outstanding control of dispersion behaviour and convincing high sound pressure levels. With its crystal clear and detailed audio performance, smooth and even frequency response over distance, high dynamic bandwidth and power and headroom capabilities all make the V-Series a good choice for any medium

to large sound reinforcement applications, for any sound genre. The line array system features an integrated rigging system ensuring speedy deployment providing a quick and easily configurable array solution for all intended applications. This flexible system can be used stand-alone, or is the ideal complement to the larger J-Series in terms of sound character, headroom, dispersion and arrayability for outfills, as a centre

cluster or delays. The high output point source loudspeakers are the answer for any sound reinforcement system that demand high sound pressure levels from a single box solution. The V loudspeakers are designed for a wide range of applications with a clear perspective to provide mobile, flexible, configurable solutions to the most arduous sound reinforcement situations.

The **Vi loudspeakers** differ only slightly in cabinet construction

and mounting hardware. They are intended for permanently installed performance spaces where the specification is rider driven. Both the Vi cabinets and mounting hardware can be properly colour matched to interior designs and are weather protected for climatically hostile environments.

### The V-Series

The 3-way passive **V7P** and **Vi7P** point source loudspeakers produce a constant directivity dispersion of 75° x 40° (h x v) with exceptional vertical constant directivity dispersion control nominally being maintained down to 350 Hz. This is achieved using a symmetrical dipolar driver arrangement for the two 10" LF neodymium drivers, with a centrally mounted horn-loaded 8" MF driver and a coaxial 1.4" exit HF compression driver mounted on a constant directivity horn. The **V10P** and **Vi10P** point source loudspeakers feature the same driver configuration, but produce a wider 110° horizontal dispersion pattern. Both loudspeakers feature a rotatable HF horn which enables deployment in either orientation. The advanced bass reflex and venting design combined with a large cabinet volume increases the LF performance of these compact cabinets, with a frequency response extending from 59 Hz to 18 kHz.

The **V-GSUB** and **Vi-GSUB** are actively driven cardioid subwoofers that require only one amplifier channel. These subwoofers share the same acoustical and visual design as the V-SUB and Vi-SUB, but are intended for ground stacked applications only.

The **V8** and **V18** line array loudspeakers produce an 80° constant directivity dispersion pattern in the horizontal plane. They utilize a passive 3-way design featuring two 10" neodymium LF drivers, one hornloaded 8" MF driver, two 1.4" exit HF compression drivers with 2.5" voicecoils mounted to a dedicated wave shaping device and a passive crossover network.

The V12 and Vi12 loudspeakers line array modules, which are acoustically and mechanically compatible with the V8 Loudpeaker and Vi8 Loudpeaker respectively, differ only in the 120° horizontal coverage. All components are arranged symmetrically around the centre axis of the cabinet to produce a perfect symmetrical dispersion pattern. Due to the dipolar arrangement of the LF drivers, a broadband, horizontal dispersion control is maintained down to approximately 250 Hz.

The **V** and **Vi** subwoofers are compact high performance cardioid subwoofers powered by a single amplifier channel. They share the same width as the V8/Vi8 and V12/Vi12 loudspeakers and are equipped with compatible flying fittings. The V and Vi-SUB house two long excursion neodymium drivers in an integrated cardioid setup to avoid unwanted energy behind the system. The Vi cabinets feature an impact resistant paint finish; Weather Resistant and Special Colour options are available.

All V loudspeakers are finished with a PCP (Polyurea Cabinet Protection) coating that provides mobile systems with protection against impact and resistance to the adverse effects on cabinets caused by changing ambient outdoor conditions.



V7P/V10P loudspeaker



Vi7P/Vi10P loudspeaker



V-GSUB



Vi-GSUB



V8/V12 loudspeaker



Vi8/Vi12 loudspeaker



Vi subwoofer

The d&b software offering aides the entire system setup process. The d&b ArrayCalc simulation software allows the virtual optimization of loudspeaker line arrays, point source and column loudspeakers as well as subwoofers and their adjustment to venue conditions. The d&b NoizCalc immission modelling **software** uses international standards to model noise immission from d&b loudspeaker systems. NoizCalc takes data from ArrayCalc and calculates the sound propagation towards the far field. The complete system configuration simulated in ArrayCalc is assimilated by the d&b R1 Remote control software into an intuitive graphical user interface to manage the amplifiers, and loudspeakers, from anywhere in the venue. The R90 touchscreen remote control provides quick, reliable, and effortless operation of day-to-day functions of a preconfigured d&b system, without needing expert level knowledge of audio.

The planning process using BIM (Building Information Modelling) is supported with Revit files available for all loudspeakers and accessories, creating accurate project data and visualisation.

d&b amplifiers are specifically designed for use with d&b loudspeakers, and are at the heart of the d&b system approach. These devices contain extensive Digital Signal Processing capabilities to provide comprehensive loudspeaker management and specific switchable filter functions to precisely target the system response for a wide variety of applications. The four channel D80 amplifier is intended for both mobile and installation applications requiring the highest Sound Pressure Levels. The installation specific four channel **30D** amplifier is intended for permanent integration within venues which require medium to high Sound Pressure Levels. These amplifiers all provide extensive user-definable equalization containing two 16-band equalizers with parametric, notch, shelving and asymmetric filters as well as delay capabilities of up to 10 seconds.

The d&b Audio network bridges interface between audio transport networks and AES3 digital audio signals while also providing distribution of Ethernet control data. The DS10 supports Dante networks, while the DS20 is used for the open standards-based Milan protocol.

The **DS100 Signal Engine** is based on a specialized rack mount 3 RU audio processor with Audinate Dante networking. It provides a 64 x 64 audio matrix with level and delay adjustments at all cross points. Additional software modules provide dynamic source positioning and emulated acoustics functions.



**R90** touchscreen remote control





30D amplifier



DS10 Audio network bridge



DS20 Audio network bridge



**DS100 Signal Engine** 

8 d&b V-Series d&b V-Series

## The V7P loudspeaker The Vi7P loudspeaker

### **V7P/Vi7P loudspeaker**

The 3-way passive V7P and Vi7P loudspeakers feature two 10" drivers in a dipole arrangement with a horn loaded 8" MF driver and a 1.4" exit compression driver mounted onto a rotatable CD horn. The Vi7P is the installation version of the V7P loudspeaker and differs only in cabinet construction, finish and mounting hardware. The innovative horn design for the centrally mounted 8" MF driver produces a remarkable sensitivity resulting in an exceptional performance in the vocal range. An advanced bass-reflex and venting design delivers an extended LF output with full bandwidth capabilities.

These high performance point source loudspeakers provide a broad variety of deployment possibilities, especially when used as a stand-alone full range system, or combined with other elements from the V-Series, either ground stacked or flown. The HF horn can be rotated by 90° to enable horizontal orientation. The loudspeaker cabinets are constructed from marine plywood, the V7P has an impact and weather protected PCP (Polyurea Cabinet Protection) finish, while the Vi7P has an impact resistant paint finish. The front of the loudspeaker cabinets are protected by a rigid metal grill. The V7P cabinet incorporates a pair of handles. M10 threaded inserts are provided for attaching d&b rigging hardware.

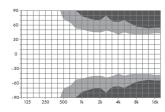
#### System data

Frequency response (-5 dB standard)	59 Hz - 18 kHz
Frequency response (-5 dB CUT mode)	100 Hz - 18 kHz
Max. sound pressure (1 m, free field) <sup>1</sup>	
with 30D/D20	137 dB
with D80	140 dB
Input level (100 dB SPL/1 m)	17 dBu

### Loudspeaker data

10 d&b V-Series

-
Nominal impedance8 ohms
Power handling capacity (RMS/peak 10 ms)500/2000 W
Nominal dispersion angle (h x v)75 $^{\circ}$ x 40 $^{\circ}$
Components2 x 10" driver with neodymium magnet
1 x 8" driver with neodymium magnet
passive crossover network
Connections V7P2 x NLT4 F/M
optional 2 x NL4 or 2 x EP5
Connections Vi7P2 x NL4 and screw terminal block
Weight V7P/Vi7P33 kg (75 lb)



V7P and Vi7P horizontal dispersion characteristics<sup>2</sup>

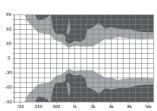
V7P and Vi7P vertical dispersion

V7P and Vi7P vertical dispersion

characteristics/horizontal setup.

characteristics2

horn rotated



V7P and Vi7P horizontal dispersion characteristics/ horizontal setup, horn rotated<sup>2</sup>



466 [18.3]

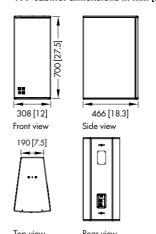


308 [12]



p view

V7P cabinet dimensions in mm [inch]



Vi7P cabinet dimensions in mm [inch]

## The V10P loudspeaker The Vi10P loudspeaker

### V10P/Vi10P loudspeaker

The 3-way passive V10P and Vi10P loudspeakers feature two 10" drivers in a dipole arrangement with a horn loaded 8" MF driver and a 1.4" exit compression driver mounted onto a rotatable CD horn. The Vi10P is the installation version of the V10P loudspeaker and differs only in cabinet construction, finish and mounting hardware. The innovative horn design for the centrally mounted 8" MF driver produces a remarkable sensitivity resulting in an exceptional performance in the vocal range. An advanced bass-reflex and venting design delivers an extended LF output with full bandwidth capabilities.

These high performance point source loudspeakers provide a broad variety of deployment possibilities, especially when used as a stand-alone full range system, or combined with other elements from the V-Series, either ground stacked or flown. The HF horn can be rotated by 90° to enable horizontal orientation. The loudspeaker cabinets are constructed from marine plywood, the V10P has an impact and weather protected PCP (Polyurea Cabinet Protection) finish, while the V10P has an impact resistant paint finish. The front of the loudspeaker cabinets are protected by a rigid metal grill. The V10P cabinet incorporates a pair of handles. M10 threaded inserts are provided for attaching d&b rigging hardware.

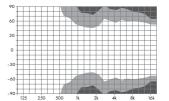
### System data

Frequency response (-5 dB standard)59 Hz	- 18 kHz
Frequency response (-5 dB CUT mode)100 Hz	- 18 kHz
Max. sound pressure (1 m, free field)1	
with 30D/D20	136 dB
with D80	139 dB
Input level (100 dB SPL/1 m)	-17 dBu

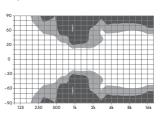
### Loudspeaker data

Nominal impedance	3 ohms
Power handling capacity (RMS/peak 10 ms)500/20	000 W
Nominal dispersion angle (h x v)110°	x 40°
Components2 x 10" driver with neodymium n	nagnet
1 x 8" driver with neodymium n	nagnet
1 x 1.4" exit compression	driver
passive crossover n	etwork
Connections V10P2 x NLT	4 F/M
optional 2 x NL4 or 2	x EP5
Connections Vi10P2 x NL4 and screw termina	l block
Weight V10P/Vi10P33 kg (	(75 lb)

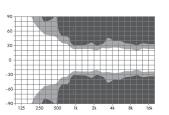
Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting
 Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars)
 at =6 dB and =12 dB



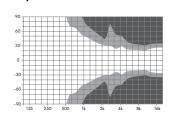
V10P and Vi10P horizontal dispersion characteristics<sup>2</sup>



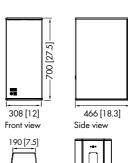
V10P and Vi10P horizontal dispersion characteristics/ horizontal setup, horn rotated<sup>2</sup>



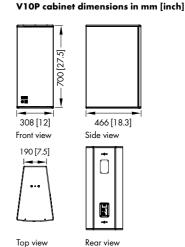
V10P and Vi10P vertical dispersion characteristics<sup>2</sup>



V10P and Vi10P vertical dispersion characteristics/ horizontal setup, horn rotated<sup>2</sup>



VIOR cabinat dimensions in mon



Vi10P cabinet dimensions in mm [inch]

at -6 dB and -12 dB

d&b V-Series 11

Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting
 Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars)

### The V7P, V10P and V-GSUB transport accessories

#### **V-GSUB/Vi-GSUB**

The V-GSUB and Vi-GSUB are actively driven high performance cardioid subwoofers powered by a single amplifier channel. The V-GSUB and Vi-GSUB are intended for ground stacked applications only, and share the same acoustical and visual design as the V-SUB and Vi-SUB, which feature integrated rigging equipment. The Vi-GSUB is the installation version of the V-GSUB. They house two long excursion neodymium drivers, an 18" driver in a bass-reflex design facing to the front and a 12" driver in a two chamber bandpass design radiating to the rear. The cardioid dispersion pattern resulting from this arrangement avoids unwanted energy behind the system that reduces the excitation of the reverberant field at low frequencies and provides the greatest accuracy of low frequency reproduction.

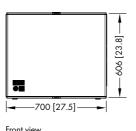
The cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front of the loudspeaker cabinet is protected by a rigid metal grill backed by an acoustically transparent foam. The V-GSUB top panel has a recess in the form of the footprint of a V7P/V10P enclosure to prevent cabinet movement when stacking one TOP loudspeaker. The enclosure features two runners to protect the bottom panel from scratching. Two correspondingly shaped recesses are incorporated into the top panel of each V-GSUB cabinet to accept these runners, preventing cabinet movement when stacked. Each side of the V-GSUB panel incorporates two handles whilst the top panel has an M20 high stand flange inserted.

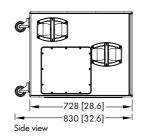
### System data

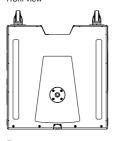
Frequency response (-5 dB standard)37 Hz - 115 Hz	
Frequency response (-5 dB 100 Hz mode) 37 Hz - 95 Hz	
Max. sound pressure (1 m, free field) <sup>1</sup>	
with 30D/D20133 dB	
with D80137 dB	

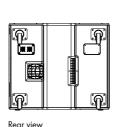
### Loudspeaker data

Nominal impedance8 ohms
Power handling capacity (RMS/peak 10 msec) $800/3200~\mathrm{W}$
Components
Connections V-GSUB2 x NLT4 F/M
optional 2 x NL4 or 2 x EP5
Connections Vi-GSUB 2 x NL4 and screw terminal block
Weight V-GSUB/Vi-GSUB61/58 kg (135/128 lb)

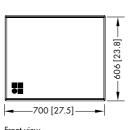


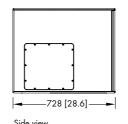


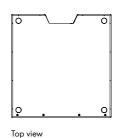


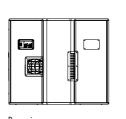


V-GSUB cabinet dimensions in mm [inch]

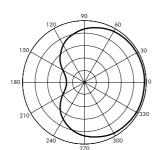






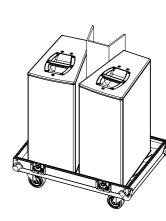


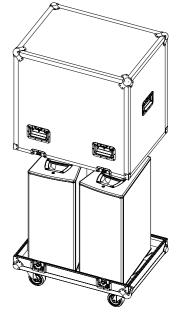
Vi-GSUB cabinet dimensions in mm [inch]



Cardioid polar pattern

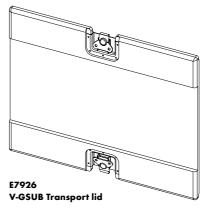






Touring case 2 x V7P/V10P Dimensions (H x W x D): 970 x 800 x 600 mm 38.2 x 31.5 x 23.6 inch

Net weight: 43 kg (94.8 lb)



### The V8 loudspeaker The Vi8 loudspeaker

### The V12 loudspeaker The Vi12 loudspeaker

#### **V8/Vi8 loudspeaker**

The V8 and Vi8 are line array loudspeakers, the Vi8 Loudpeaker is the installation version of the V8 Loudpeaker. They are 3-way passive designs featuring two 10" LF drivers, one hornloaded 8" MF driver and two 1.4" exit HF compression drivers with 2.5" voicecoils mounted to a dedicated waveshaping device. The symmetrical dipolar arrangement of the neodymium LF drivers around the centrally mounted coaxial MF and HF components allows a smooth overlap of the adjacent frequency bands in the crossover design. This results in an exceptional 80° horizontal constant directivity dispersion control nominally being maintained down to 250 Hz.

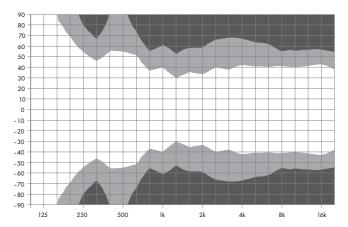
The mechanical and acoustical design enables flown vertical arrays of up to twenty four loudspeakers to be suspended using vertical splay angles between 0° to 14° with a 1° resolution. It can be used in columns of purely V8 or Vi8 loudspeakers or combined with V12/Vi12s and/or with V-SUB/Vi-SUBs. The cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front of the loudspeaker cabinet is protected by a rigid metal grill backed by an acoustically transparent foam. Each side panel of the V8 cabinet incorporates a handle while two additional recessed grips are provided at the rear bottom of both the V8 and Vi8.

### System data

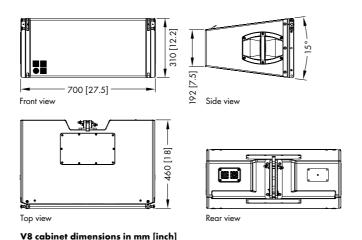
Frequency response (-5 dB standard) 67 Hz - 18 kHz
Frequency response (-5 dB CUT mode)100 Hz - 18 kHz
Max. sound pressure (1 m, free field) <sup>1</sup>
with 30D/D20139 dB
with D80142 dB

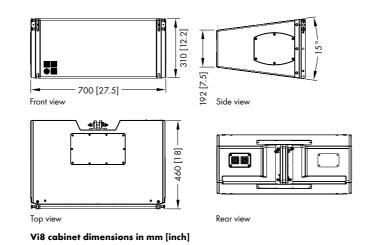
### Loudspeaker data

Louaspeaker aara	
Nominal impedance	8 ohms
Power handling capacity (RMS/pec	ak 10 msec)500/2000 W
Nominal dispersion angle (horizont	al)80°
Splay angle settings	0° - 14°
	1° increment
Components	
2	x 1.4" exit compression driver
	passive crossover network
Connections V8	2 x NLT4 F/M
	optional 2 x NL4 or 2 x EP5
Connections Vi8	
Weight	34 kg (75 lb)



V8 and Vi8 horizontal dispersion characteristics<sup>2</sup>





Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting

#### V12/Vi12 loudspeaker

The V12 and Vi12 are line array loudspeakers, the Vi12 loudspeaker is the installation version of the V12 loudspeaker. They are 3-way passive designs featuring two 10" LF drivers, one hornloaded 8" MF driver and two 1.4" exit HF compression drivers with 2.5" voicecoils mounted to a dedicated waveshaping device. The symmetrical dipolar arrangement of the neodymium LF drivers around the centrally mounted coaxial MF and HF components allows a smooth overlap of the adjacent frequency bands in the crossover design. This results in an exceptional 120° horizontal constant directivity dispersion control nominally being maintained down to 250 Hz.

The mechanical and acoustical design enables flown vertical arrays of up to twenty four loudspeakers to be suspended using vertical splay angles between them of 0° to 14° with a 1° resolution. It can be used in columns of purely V12 or Vi12 loudspeakers or combined with V8/Vi8s and/or with V-SUB/

The cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front of the loudspeaker cabinet is protected by a rigid metal grill backed by an acoustically transparent foam. Each side panel of the V12 cabinet incorporates a handle while two additional recessed grips are provided at the rear bottom of both the V12 and Vi12.

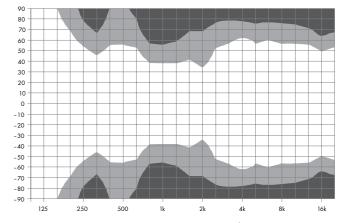
#### System data

Frequency response (-3 dB standard) 6/ Hz - 18 k	ίHz
Frequency response (-5 dB CUT mode)100 Hz - 18 k	κHz
Max. sound pressure (1 m, free field) <sup>1</sup>	
with 30D/D20139	dB
with D80142	dB

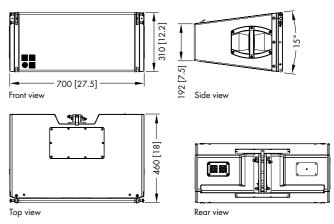
### Loudspeaker data

Louaspeaker aara	
Nominal impedance	8 ohms
Power handling capacity (RMS/	peak 10 msec)500/2000 W
Nominal dispersion angle (horiz	ontal)120°
Splay angle settings	0° - 14°
	1° increment
Components	2 x 10" driver
	1 x 8" driver
	2 x 1.4" exit compression driver
	passive crossover network
Connections V12	2 x NLT4 F/M
	optional 2 x NL4 or 2 x EP5
Connections Vi12	2 x NL4
Weight	34 kg (75 lb)

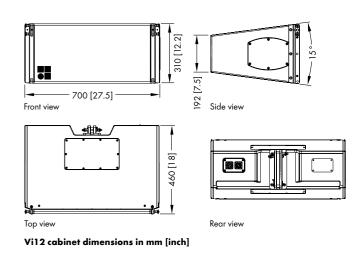
Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting  $^{2}\,\,$  Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars) at -6 dB and -12 dB



V12 and Vi12 horizontal dispersion characteristics<sup>2</sup>



V12 cabinet dimensions in mm [inch]



<sup>&</sup>lt;sup>2</sup> Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars) at -6 dB and -12 dB

## The V subwoofer The Vi subwoofer

#### V/Vi subwoofer

The V-SUB/Vi-SUB are actively driven high performance cardioid subwoofers powered by a single amplifier channel. The V-SUB and Vi-SUB feature integrated rigging equipment, and share the same acoustical and visual design as the V-GSUB and Vi-GSUB, which are intended for ground stacked applications only. The Vi-SUB is the installation version of the V-SUB. They house two long excursion neodymium drivers, an 18" driver in a bass-reflex design facing to the front and a 12" driver in a two chamber bandpass design radiating to the rear. The cardioid dispersion pattern resulting from this arrangement avoids unwanted energy behind the system that reduces the excitation of the reverberant field at low frequencies and provides the greatest accuracy of low frequency reproduction.

The V-SUB and Vi-SUB can be used to supplement V8/Vi8 and V12/Vi12 loudspeakers in various combinations, ground stacked or flown, either integrated on top of a V8/V12 or Vi8/Vi12 array or as a separate column.

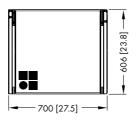
The cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front of the loudspeaker cabinet is protected by a rigid metal grill backed by an acoustically transparent foam. Each side of the V subwoofer panel incorporates two handles whilst the top panel has an M20 high stand flange inserted.

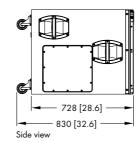
#### System data

Frequency response (-5 dB standard)	37 - 115 Hz
Frequency response (-5 dB 100 Hz mode)	37 - 95 Hz
Max. sound pressure (1 m, free field) <sup>1</sup>	
with 30D/D20	133 dB
with D80	137 dB
with 30D/D20	133 dB

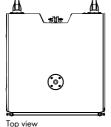
### Loudspeaker data

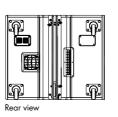
Nominal impedance	8 ohms
Power handling capacity (RMS/peak 10 msec)	800/3200 W
Splay angle settings	0° and 2.5°
Components	1 x 18" driver
	1 x 12" driver
Connections V-SUB	2 x NLT4 F/M
optional 2 x	NL4 or 2 x EP5
Connections Vi-SUB	2 x NL4
Weight V-SUB/Vi-SUB64/62 k	g (141/137 lb)



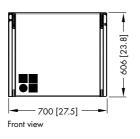


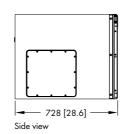
Front view



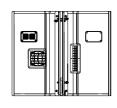


V-SUB cabinet dimensions in mm [inch]

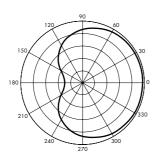








Top view Rear v
Vi-SUB cabinet dimensions in mm [inch]





Cardioid polar pattern

V-SUB Wooden lid

## The Vi Weather Resistant, Special Colour and Custom solutions options

#### Weather Resistant (WR) option

The WR option provides an IP54 rating, and enables operation of loudspeakers in changing ambient conditions, with some loudspeakers able to achieve an IP55 rating. However it is not intended to enable permanent, unprotected operation of loudspeakers outdoors. Cabinets used outdoors even with the WR option should always be aimed either horizontally or with a downward tilt. All WR speakers will be delivered without a cable. An optional WR cable (Z5763.000 - H07-RN-F 2 x 2.5 mm² / AWG 13, Faston connector type 2 x 6.3 mm male) with a standard length of 5.5 m is available. Other length on request.

### Special Colour (SC) option

The paint finish of all loudspeaker cabinets and most accessories can be executed in almost any custom colour in accordance with common colour tables. All rigging fittings at the rear of the cabinet, Front links and Locking pins remain in black. Other paint finishes such as metallic are available on request. The acoustically transparent foam fitted behind the rigid metal grill is also painted with the requested special colour.

### Custom solutions (SVS and SWR) option

SVS (Variants For Stadiums) loudspeakers have no integral rigging components, but instead, have threaded inserts in their side panels. The cabinets will be mechanically supported by metal brackets specifically designed for the respective application by Custom solutions.

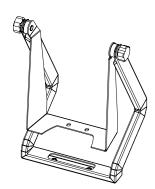
SWR (Sea Water Resistant) loudspeaker models are based on WR or SVS variants where available, and withstand outdoor operation in wet and acid or salty environments like on cruise ships or coastal locations. Other custom solutions are available upon request.

### The V7P/Vi7P, V10P/Vi10P and V-GSUB/Vi-GSUB mounting accessories

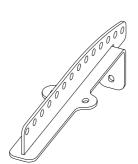
### The V7P/Vi7P, V10P/Vi10P and V-GSUB/Vi-GSUB mounting examples

### Safety approval

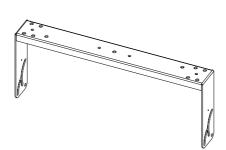
d&b loudspeakers and accessories are designed for setup and use within situations requiring compliance with the provisions and directives of the DGUV regulation 17 (formerly BGV C1).



Z5383 **VP Mounting bracket** 



Z5384 **VP Flying adapter** 



**Z5388 VP Horizontal bracket** 



Z5550 M20 Stand adapter



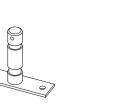
Pipe clamp for TV spigot For a tube diameter up to 70 mm/2.75"



Rota clamp WLL: 500 kg (1100 lb) for a tube diameter up to 51 mm/2"



Z5049 Flying pin 8mm



Z5010 TV Spigot with fixing plate



**VP Flying adapter link** 



V7P/V10P with **Z5383 VP Mounting bracket** Z5010 TV Spigot with fixing plate Z5012 Pipe clamp



V7P/V10P1 with Z5049 Flying pin 8mm



V7P/V10P with **Z5383 VP Mounting bracket** Z5010 TV Spigot with fixing plate Z5024 Loudspeaker stand adapter



V7P/V10P with **Z5384 VP Flying adapter** Z5015 TV Spigot for flying adapter 02 **Z5012 Pipe clamp** 



V7P/V10P with **Z5388 VP Horizontal bracket Z5010 TV Spigot with fixing plate** Z5012 Pipe clamp

V7P/V10P with V-GSUB

<sup>1</sup> This example is not valid for Vi speakers

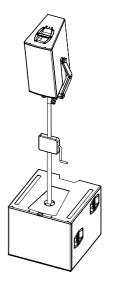


V7P/V10P with Z5384 VP Flying adapter Z5147 Rota clamp **Z5551 VP Flying adapter link** 

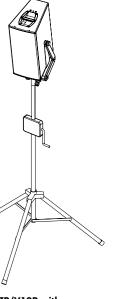


V7P/V10P with

Z5550 M20 Stand adapter



V7P/V10P with **Z5383 VP Mounting bracket** Z5024 Loudspeaker stand adapter Z5013 M20 pole with winder



V7P/V10P with **Z5383 VP Mounting bracket** Z5024 Loudspeaker stand adapter **Z5009 Loudspeaker** stand with winder



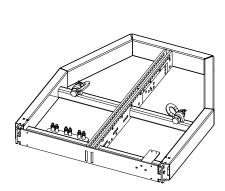
Loudspeaker stand adapter

### The V8, V12 and V-SUB rigging accessories

### The V8, V12 and V-SUB rigging examples

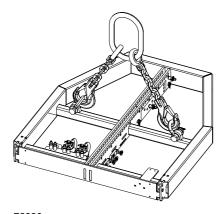
### Safety approval

d&b loudspeakers and accessories are designed for setup and use within situations requiring compliance with the provisions and directives of the DGUV regulation 17 (formerly BGV C1).



Z5380 V Flying frame

For a maximum of twenty four V8/V12 loudspeakers or fourteen V subwoofers



Z5380 V Flying frame

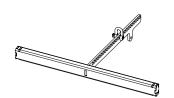
Supplied with

1 x 5382 V Safety chainset

2 x V Load adapter

1 x V Load adapter for Rota clamp

2 x Front link



Z5385 V Flying adapter

For a maximum of four V8/V12 loudspeakers; supplied with 1t Shackle



Z5382 V Safety chainset



Z5381

V Hoist connector chain



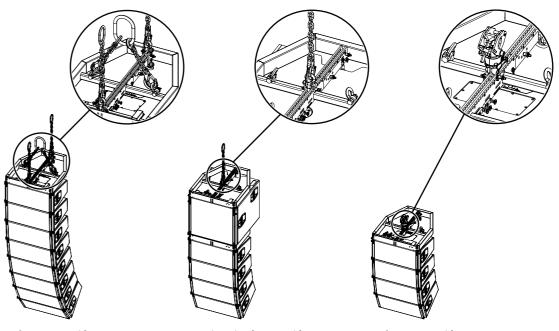
Z5147 Rota clamp

WLL: 500 kg (1100 lb) for a tube diameter up to 51 mm/2"



Z5386 V Stack adapter

These rigging examples are for illustration only. For further information please refer to the TI 385 d&b Line array design as well as the V-Series Rigging manual, both of which are available for download at www.dbaudio.com.



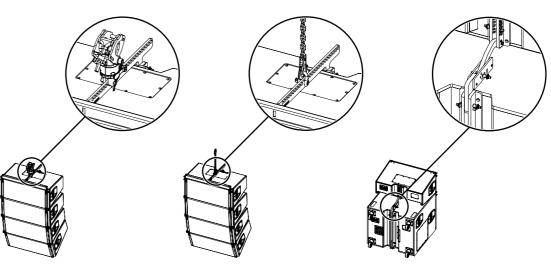
V8/V12 array with Z5380 V Flying frame 2 x Z5381 V Hoist connector chain Z5382 V Safety chainset

V-Series mixed array with Z5380 V Flying frame Z5381 V Hoist connector chain

V8/V12 array with Z5380 V Flying frame Z5147 Rota clamp



V-SUB column with Z5380 V Flying frame



V8/V12 array with Z5385 V Flying adapter Z5147 Rota clamp

V8/V12 array with Z5385 V Flying adapter E6507 1t Shackle

V-Series ground stack with Z5386 V Stack adapter



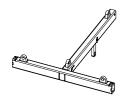
V-Series ground stack with Z5380 V Flying frame

### The Vi8, Vi12 and Vi-SUB rigging accessories and examples

### The V8, V12 and V Flying frame cases and carts

### Safety approval

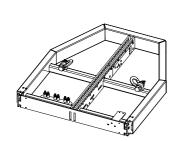
d&b loudspeakers and accessories are designed for setup and use within situations requiring compliance with the provisions and directives of the DGUV regulation 17 (formerly BGV C1).



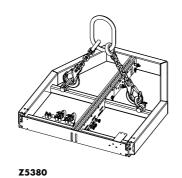
Z5387.000 Vi Mounting frame top For a maximum load equivalent to four Vi8/Vi12 loudspeakers 136 kg (300 lb)



Z5387.001 Vi Mounting frame bottom



**V** Flying frame For a maximum of twenty four V8/V12/Vi8/Vi12 loudspeakers or fourteen V/Vi subwoofers



**V** Flying frame Supplied with 1 x 5382 V Safety chainset 2 x V Load adapter 1 x V Load adapter for Rota clamp 2 x Front link



E6507 1t Shackle

Vi array with

**V** Flying frame

Vi Mounting frame bottom (2pcs)

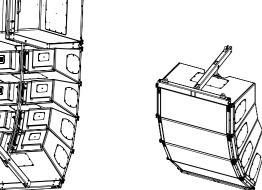
Z5387.001

Z5380



Z5382 V Safety chainset





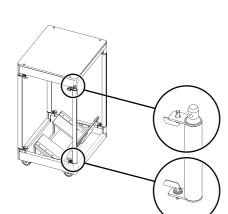
Vi8/Vi12 array with Z5387.000 Vi Mounting frame top



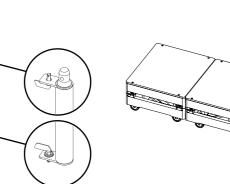
Vi-SUB column with Z5387.000 Vi Mounting frame top



E7462 Touring case 2 x V8/V12 Dimensions (H x W x D): 900 x 800 x 600 mm 35.4 x 31.5 x 23.6 inch Net weight: 40 kg (88 lb)



Touring cart 4 x V8/V12 Dimensions (H x W x D): 1420 x 700 x 800 mm 56 x 27.5 x 31.5 inch Total weight: 190 kg (420 lb) Maximum top load: 100 kg (220 lb)



E7465

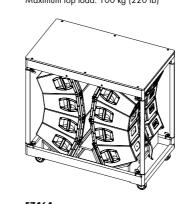
Touring case 2 x V Flying frame

Dimensions (H x W x D):

38.2 x 31.5 x 23.6 inch

Net weight: 52 kg (120 lb)

970 x 800 x 600 mm







d&b V-Series 23

Touring cart 8 x V8/V12

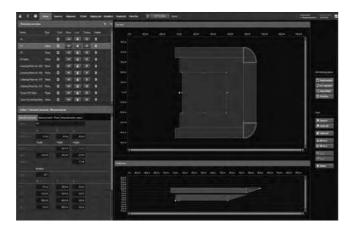
Dimensions (H x W x D): 1420 x 1400 x 800 mm  $56 \times 55 \times 31.5$  inch Total weight: 360 kg (800 lb) Maximum top load: 200 kg (440 lb)

### The d&b ArrayCalc simulation software

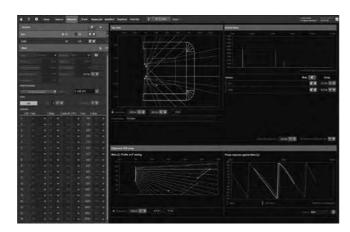
The d&b ArrayCalc simulation software is the prediction tool for d&b line arrays, column and point source loudspeakers as well as subwoofers. This is a comprehensive toolbox for all tasks associated with acoustic design, performance prediction, alignment, rigging and safety parameters. For safety reasons d&b line arrays must be designed using the d&b ArrayCalc simulation software. ArrayCalc is available as a native standalone application for both Microsoft Windows<sup>1</sup> (Win7 or higher) and Mac OS X<sup>2</sup> (10.7 or higher) operating systems. In combination with the d&b Remote Network, this can significantly reduce setup and tuning time in mobile applications and allows for precise simulations when planning installations. Listening planes can be defined in the venue tab, creating a three dimensional representation of any audience area in a given venue. This can also include balconies, side stalls, arenas, in the round scenarios or festivals. Special functions assist in obtaining accurate dimensions with laser distance finders and inclinometers.

#### **Simulation**

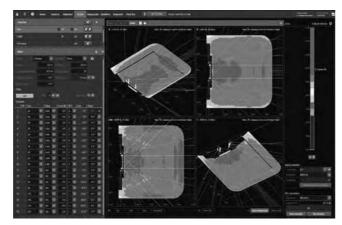
Up to forty flown arrays or subwoofer columns can be defined in a project file as single hangs or in pairs. A selection of d&b point source loudspeakers can also be fully integrated as well as a ground stacked SUB array consisting of up to eighty positions. All can be freely positioned according to their intended application, for example as main hang, outfill, nearfill or delay. Position, orientation, aiming and coverage details are displayed. Level over distance is calculated for each source with high resolution in real time, for either band limited or broadband input signals. The comprehensive simulation precisely models the actual performance of the system, taking into account input level, all system configuration options (such as CUT, CPL, HFC or INFRA), limiter headroom and air absorption. Acoustic obstacles, such as video screens, can be added to a model. Acoustic shadowing, whether by these obstacles, or a balcony overhand, is taken into consideration. The load status of all array rigging components is calculated accurately and displayed to determine whether a aiven array is within the load tolerance. Subwoofer array design is assisted by coverage and polar plot prediction. A specialized algorithm allows the user to specify subwoofer positions and a coverage angle, which is then converted into appropriate delay settings that result in the desired dispersion. The glianment tab enables different sources to be time aligned to one another, as well as showing arrival times and Sound Pressure Levels at a definable reference point on one of the audience areas. For alignment of the flown system with the ground stacked SUB array, the phase response of both the SUB array and a flown source is calculated at a definable reference point. Both



Venue



Alignment



3D Plot auad

simulations reflect changes in delay time to the single sources in real time. The d&b ArrayCalc simulation software is available at www.dbaudio.com, along with further information and video tutorials.

#### **Prediction**

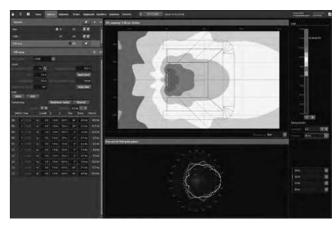
The level distribution resulting from the interaction of all active sources can be mapped onto the audience areas in a three-dimensional view, which can also be zoomed, rotated and exported as a graphics file. EASE and DXF data export capabilities are also available. A rigging plot with all necessary coordinates, dimensions and weights of arrays is generated for export and printing and a parts list, detailing all components required. The d&b ArrayCalc Viewer app presents this key information for positioning and flying a d&b audiotechnik loudspeaker system on a mobile device. Once the system has been designed, calculated and optimized, all relevant project information can be shared via email, AirDrop, or downloaded onto any iOS or Android device.

### ArrayProcessing

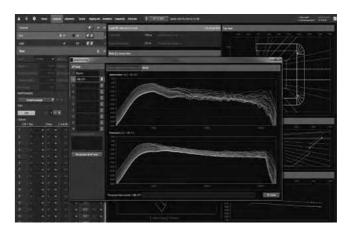
The optional ArrayProcessing function applies powerful filter algorithms to optimize the tonal (spectral) and level (spatial) performance of a line array column over the audience area defined by its mechanical vertical coverage angle. Within the d&b ArrayCalc simulation software, spectral and level performance targets over the listening areas can be defined while specific level drops or offsets can be applied to certain areas, to assign reduced level zones. ArrayProcessing applies a combination of FIR and IIR filters to each individual cabinet in an array to achieve the targeted performance, with an additional latency of only 5.9 ms. This significantly improves the linearity of the response over distance as well as seamlessly correcting for air absorption. In addition, ArrayProcessing employs the same frequency response targets for all d&b line arrays, to ensure all systems share a common tonality. This provides consistent sonic results regardless of array length or splay settings. The resulting coverage is enhanced with spectral consistency and defined level distribution, achieving more linear dispersion and total system directivity to cover longer distances or steep listening areas effectively.

### **R1 Remote Control Software**

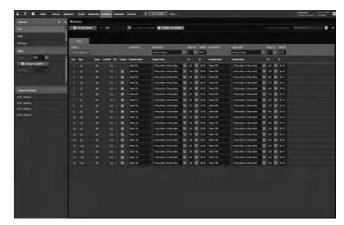
R1 uses the same project file created by ArrayCalc and generates an intuitive graphical user interface including complete details of the simulated system, loudspeakers, amplifiers, remote IDs, groups, ArrayProcessing data and all configuration information. This workflow removes the need to manually transfer data from one software program to the other.



Sources, SUB array



ArrayProcessing



Amplifiers

Microsoft Windows is a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries

<sup>&</sup>lt;sup>2</sup> Mac OS X is a trademark of Apple Inc., registered in the U.S. and other countries

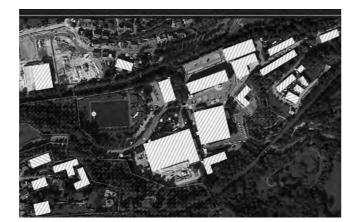
### The d&b NoizCalc immission modelling software

The d&b software uses international standards to model the far field noise immission from multiple complex and coherently emitting sources such as line arrays and subwoofer arrays. More and more, gaining permission and licenses to stage live open air events requires an official statement with a prediction of how noise could impact on the surrounding area. NoizCalc takes all complex loudspeaker data and a reference point from the d&b ArrayCalc simulation software and calculates the sound propagation and relative attenuation values towards the far field for a certain scenario with particular meteorological conditions for one or more d&b loudspeaker systems.

A 3D terrain map imported from Google Maps or Street View displays the calculated immission on the areas surrounding the audience listening zones. This visual representation shows the actual system performance in the far field, enabling users to optimize for listeners while satisfying local noise restrictions and offsite regulations.

To ensure reliable results, NoizCalc includes all complex data concerning the addition and subtraction of sound waves, including phase information to describe the combination and interaction effects within a loudspeaker system consisting of multiple line arrays, subwoofer arrays and delay systems.

NoizCalc models immissions in the far field according to the internationally accepted ISO 9613-2 or Nord2000 calculation standards. Ground characteristics can be set depending on the absorbency or reflectivity of surfaces, while areas with volume attenuating properties can be defined. Buildings can be included, and the maximum reflection order option adjusts how many reflections are calculated. Parameters for humidity, air pressure and temperature ensure that the correct air absorption figures are accounted. The ISO 9613-2 standard requires limited meteorological information and assumes a worst-case scenario. The more sophisticated propagation model, Nord2000 enables a more precise handling of meteorological conditions allowing the user to model with prevailing wind information. The d&b NoizCalc immission modelling software is available at www. dbaudio.com for registered download, along with furthe information and video tutorials. It was developed in collaboration with SoundPLAN, a specialist software developer for environmental noise prediction.





**Graphic plot** 

### The d&b R1 Remote control software

The remote control capability of the d&b Remote Network enables central control and monitoring of a complete d&b loudspeaker system from anywhere in the network, be it from a computer in the control room, at the mix position, or on a wireless tablet in the auditorium. This central access to all functions throughout the d&b Remote Network unlocks the full potential of the d&b system approach. In a typical user workflow, the d&b Remote Network takes settings optimized in the d&b ArrayCalc simulation software and applies these to all the amplifiers within the network.

All functions and controls available on the front panel of d&b amplifiers may be remotely controlled and/or monitored using the d&b R1 Remote control software. This allows each channel of the amplifier to be controlled and enables the creation of groups of loudspeakers. When grouped together, a button or fader can control the overall system level, zone level, equalization and delay, power ON/OFF, MUTE, as well as loudspeaker specific function switches such as CUT/HFA/HFC and CPL. An offline mode is provided for preparation in advance of an event, without the amplifiers being present or connected.

d&b System check verifies that the system performs within a predefined condition, while the Array verification function automatically identifies the physical position of a loudspeaker in an array to check that the system is cabled correctly. Extensive facilities for storing and recalling system settings are provided allowing these to be repeated, as and when required. For mobile applications, project files can be easily adjusted for use with a different set of equipment at another location.

In installation projects the R90 touchscreen remote control can be used for quick and reliable operation of day-to-day functions of a pre-configured d&b system without needing expert level knowledge of audio. The built-in 7" panel PC provides users with one-touch control over power, mute, level, grouping and recall of up to nine AmpPresets, entirely independent of R1.

The R1 software is optimized for use with touch screen, mouse and keyboard and runs on both Microsoft Windows<sup>1</sup> (Win7 or higher) and Mac OS X<sup>2</sup> (10.7 or higher).

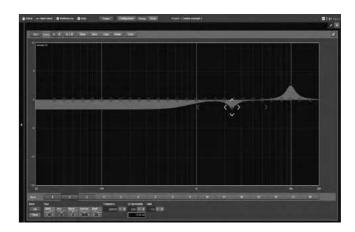
Further information is provided in the d&b Amplifier and Software brochure which is available for download at www.dbaudio.com.



Home



Remote in Configuration mode



16-band equalizer

26 d&b V-Series d&b V-Series 27

<sup>&</sup>lt;sup>1</sup> Microsoft Windows is a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries

<sup>&</sup>lt;sup>2</sup> Mac OS X is a trademark of Apple Inc., registered in the U.S. and other countries

### The d&b amplifiers

The d&b amplifiers are designed specifically to power d&b loudspeakers and are the beating heart of the d&b System reality. As such, they incorporate Digital Signal Processing for comprehensive loudspeaker management, switchable filter functions, remote capabilities and user-definable controls, to fulfil the exact needs of each application.

Every loudspeaker configuration combines comprehensive system limiting, and equalization and crossover settings to ensure consistent results and optimal performance. d&b amplifiers offer

different output configurations for different loudspeaker setups, including Dual Channel mode, for passive setups, Mix TOP/SUB mode, in which two channels are driven through a single output connector, and 2-Way Active mode, which also sends the output of two channels down one connector to drive appropriate loudspeakers actively.

The d&b switch functions provide selected filters to precisely tailor a wide variety of setups to their applications. Examples of these switch functions are the CSA (Cardioid Subwoofer Array)

and HFC (High Frequency Compensation) modes. CSA increases low frequency directivity control by minimising energy transmission towards the rear while HFC compensates for air absorption for loudspeakers covering far field listening positions. In addition to these functions, d&b amplifiers offer a comprehensive set of specific filters such as CUT, a cut mode for TOP loudspeakers when used with d&b subwoofers; CPL, to compensate for the coupling effect between loudspeakers in close proximity to other loudspeakers or hard objects and HFA

mode, to attenuate the high frequencies of a loudspeaker to mimic the effect of far field listening.

These devices offer extended, user-definable equalization and delay capabilities, eliminating the need for external processing devices in the signal chain. All d&b amplifiers integrate with the d&b Remote network to enable the remote control and management of systems from anywhere within a network. Further information is provided in the d&b Amplifier and Software brochure which is available for download at www.dbaudio.com.

#### Comparison of the d&b amplifiers

	D80	30D	D20
User interface	Encoder/colour TFT touchscreen	LED indicators	Encoder/colour TFT touchscreen
Output channels	4	4	4
Input channels	4 x AES3 or 4 x analog or 2 x AES3 and 2 x analog	4 x AES3 and 4 x analog	4 x AES3 or 4 x analog or 2 x AES3 and 2 x analog
Latency	0.3 msec	0.3 msec	0.3 msec
User equalizers (per channel)	2 x 16-band	2 x 16-band	2 x 16-band
Delay	10 sec/3440 m	10 sec/3440 m	10 sec/3440 m
Maximum output power (THD+N < 0.5%, 12 dB crest factor)	4 x 2000 W into 8 ohms 4 x 4000 W into 4 ohms	4 x 800 W into 8 ohms 4 x 1600 W into 4 ohms	4 x 800 W into 8 ohms 4 x 1600 W into 4 ohms
Output routing	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active
Output connectors	NL4/EP5 plus central NL8	Phoenix Euroblock	NL4 plus central NL8
GPIO connector, 5 ports	No	Phoenix Euroblock	No
Cable compensation	LoadMatch	LoadMatch	LoadMatch
Power supply	Autosensing switched mode power supply with active PFC	Universal range switched mode power supply with active PFC	Universal range switched mode power supply with active PFC
Mains voltage	100 - 127/208 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz
Weight (kg/lb)	19/42	10.6/23.4	10.8/23.8
Dimensions	2 RU x 19" x 530 mm	2 RU x 19" x 435 mm	2 RU x 19" x 460 mm
Remote	OCA via Ethernet/CAN	OCA via Ethernet/CAN	OCA via Ethernet/CAN
Airflow			

## The controller setups and operation with d&b amplifers

### The V-Series frequency responses

#### **Arc and Line mode**

The Arc mode is intended for line array loudspeakers when used in curved array sections. The Line mode is used for long throw array sections with three or more consecutive splay settings of 0°, 1° or 2°. Compared to the Arc mode, the mid/high range is reduced to compensate for the extended near field.

#### AP setup

In connection with ArrayProcessing (AP), the AP setup contains the AP data that are generated in the ArrayCalc simulation software. These are transferred to the applicable amplifiers via the d&b Remote network (OCA/AES70) using R1.

### **CUT** mode

Set to CUT, the cabinet low frequency level is reduced and it is now configured for use with the d&b V or J subwoofers.

#### **HFC** mode

Selecting the HFC (High Frequency Compensation) mode compensates for loss of high frequency energy due to absorption in air when loudspeakers are used to cover far field listening positions. HFC has two settings which should be used selectively, HFC1 for cabinets covering distances larger than 30 m (100 ft) and HFC2 for those covering distances larger than 60 m (200 ft). This can be used to achieve the correct sound balance between close and remote audience areas allowing all amplifiers driving the array to be fed from the same signal source.

#### **HFA** mode

In HFA mode (High Frequency Attenuation), the HF response of the system is rolled off. HFA provides a natural, balanced frequency response when a unit is placed close to listeners in near field or delay use. HFA begins gradually at 1 kHz, dropping by approximately 3 dB at 10 kHz. This roll off mimics the decline in frequency response experienced when listening to a system from a distance in a typically reverberant room or auditorium.

#### **CPL** function

The CPL (Coupling) function compensates for coupling effects between the cabinets of an array. CPL begins gradually around 2 kHz, with the maximum attenuation below 100 Hz.

#### 100 Hz mode

The 100 Hz mode limits the upper operating frequency of the subwoofer to 100 Hz, complementing top cabinets in full range mode.

### Recommended amplifiers for mobile applications

	V7P	V10P	V-GSUB	<b>V8</b>	V12	V-SUB
D80	х	х	х	х	х	x

### Recommended amplifiers for installation applications

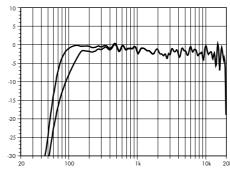
	Vi7P	Vi10P	Vi-GSUB	Vi8	Vi12	Vi-SUB
30D	×	х	х	х	х	x

### Maximum loudspeakers per amplifier channel

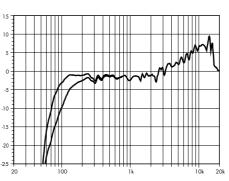
		V-GSUB Vi-GSUB			
2	2	2	2	2	2

### Available controller settings

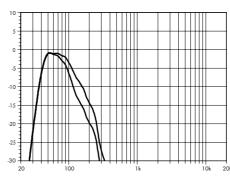
	V7P Vi7P	V10P Vi10P	V-GSUB Vi-GSUB	V8 Vi8	V12 Vi12	V-SUB Vi-SUB
Arc/Line				х	х	
AP				х	х	х
CUT	х	х		х	х	
HFC				х	х	
HFA	х	x				
CPL	х	х		х	х	
100 Hz			х			х



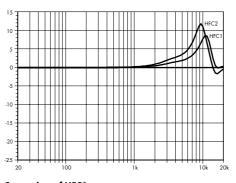
V7/Vi7P standard and CUT (single cabinet)



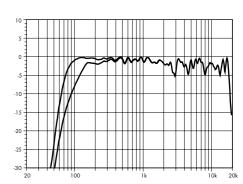
V8/Vi8 standard and CUT (single cabinet)



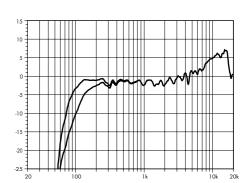
V-SUB/Vi-SUB and V-GSUB/Vi-GSUB standard and 100 Hz



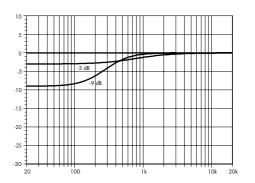
Correction of HFC\*
\*schematic diagram



V10/Vi10P standard and CUT (single cabinet)

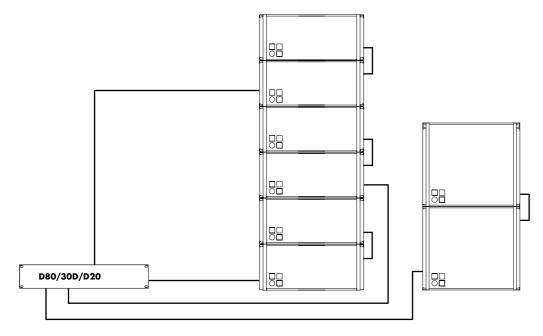


V12/Vi12 standard and CUT (single cabinet)

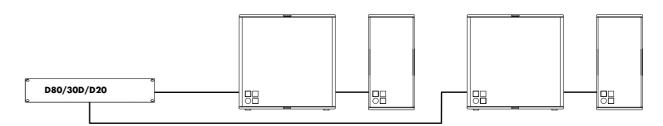


Correction of CPL\*
\*schematic diagram

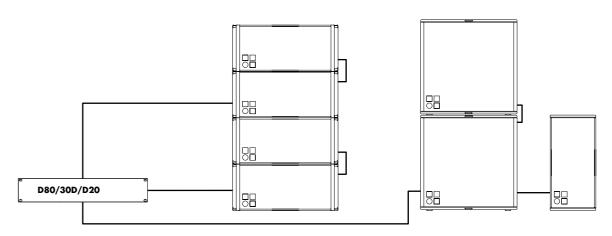
### The d&b amplifier output modes



D80/30D/D20 amplifier in Dual Channel mode for V7P, V10P, Vi7P, Vi10P, V8, V18, V12, Vi12 as well as V-GSUB, Vi-GSUB, V-SUB and Vi-SUB



D80/30D/D20 amplifier in Mix TOP/SUB mode for V7P, V10P, Vi7P, Vi10P, V8, V12, Vi8, Vi12 as well as V-GSUB, Vi-GSUB, V-SUB and Vi-SUB as well as V-GSUB, Vi-GSUB, V-SUB and Vi-SUB



D80/30D/D20 amplifier in a mixed configuration of Dual Channel and Mix TOP/SUB mode for V7P, V10P, Vi7P, Vi10P, V8, V12, Vi8, Vi12 as well as V-GSUB, Vi-GSUB, V-SUB and Vi-SUB

## The DS10 and DS20 Audio network bridges The DS100 Signal Engine

#### **D\$10 Audio network bridge**

The DS10 Audio network bridge interfaces between Dante networks and AES3 digital audio signals, while also providing distribution of Ethernet control data. Positioned within the signal chain in front of the amplifiers, this 1 RU device expands the d&b system approach. Each unit can deliver up to sixteen Dante network channels via AES3 digital signal outputs. Additionally, four AES3 input channels provide access to the Dante audio network for applications such as a break-in from a Front of House console. The DS10 incorporates an integrated 5-port switch, offering a primary and redundant network for the Dante protocol, as well as advanced functions such as Multicast Filtering and VLAN modes. Using the DS10 Audio network bridge, audio signals and remote control data can be combined using a single Ethernet cable.

#### DS20 Audio network bridge

The DS20 Audio network bridge supports the open standards-based Milan protocol rather than Dante. Milan (Media integrated local area networking) is a high level interoperability solution based on Audio Video Bridging (AVB) technology. The main advantages are deterministic behaviour (zero network congestion); improved reliability; optimum synchronization and hassle free network setup, as no special settings, such as QoS, need to be set within the switches to ensure delivery.

#### **DS100 Signal Engine**

The d&b DS100 Signal Engine is the platform underneath the Soundscape, based on a specialized rack mount 3 RU audio processor with Audinate Dante networking. It provides a 64 x 64 audio matrix with level and delay adjustments at all cross points. Additional software modules provide dynamic source positioning and emulated acoustics functions. The DS100 is a versatile tool for use within complex audio systems to route and distribute multiple audio channels to numerous amplifiers driving loudspeaker positions and zones, show relay and break out rooms. The networking capabilities with a Dante enabled processor are significant, particularly for busy, multi-room complexes. The DS100 completely integrates with the overall d&b system approach, including loudspeakers, amplifiers, rigging, transport and networking accessories and the DS10 Audio network bridge. The complete system is designed and optimized in the d&b ArrayCalc simulation software, and controlled via the d&b R1 Remote control software.



The DS10 Audio network bridge front view



The DS10 Audio network bridge rear view



The DS20 Audio network bridge front view

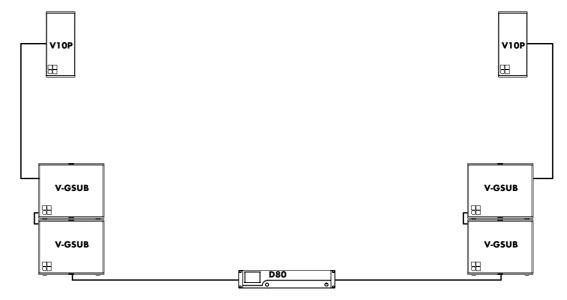


The DS20 Audio network bridge rear view

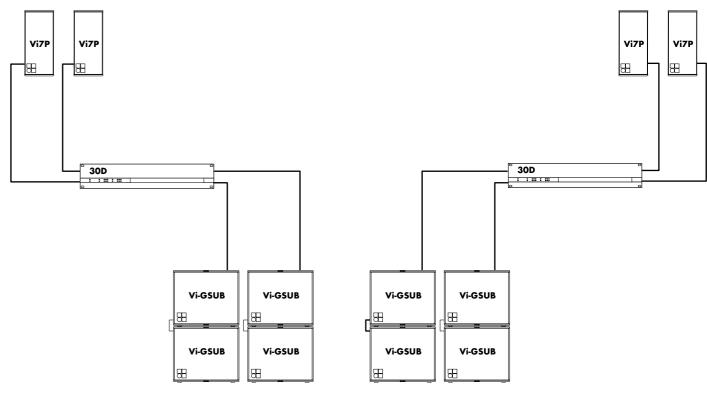


The DS100 Signal Engine front view

### The V-Series configuration examples

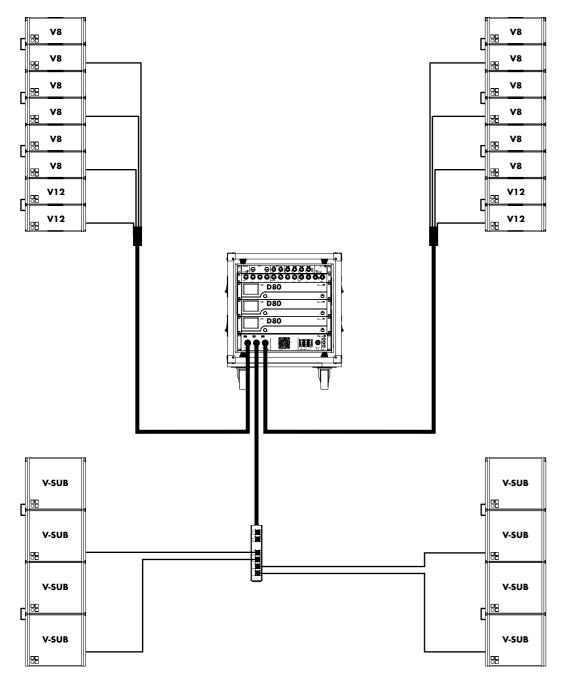


V-Series L/R configuration comprising V10Ps and V-GSUBs with a D80 amplifier in Mix TOP/SUB mode

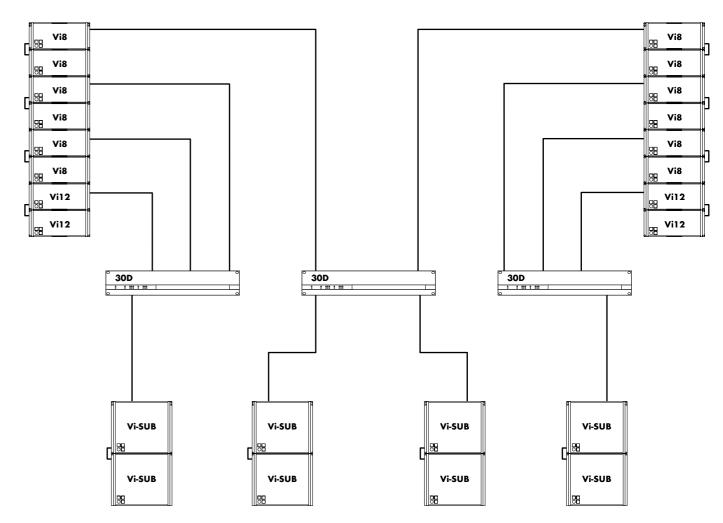


Vi7P loudspeakers in a distributed point source system and ground stacked Vi-GSUBs, with 30D amplifiers in Dual Channel mode

### The V-Series configuration examples

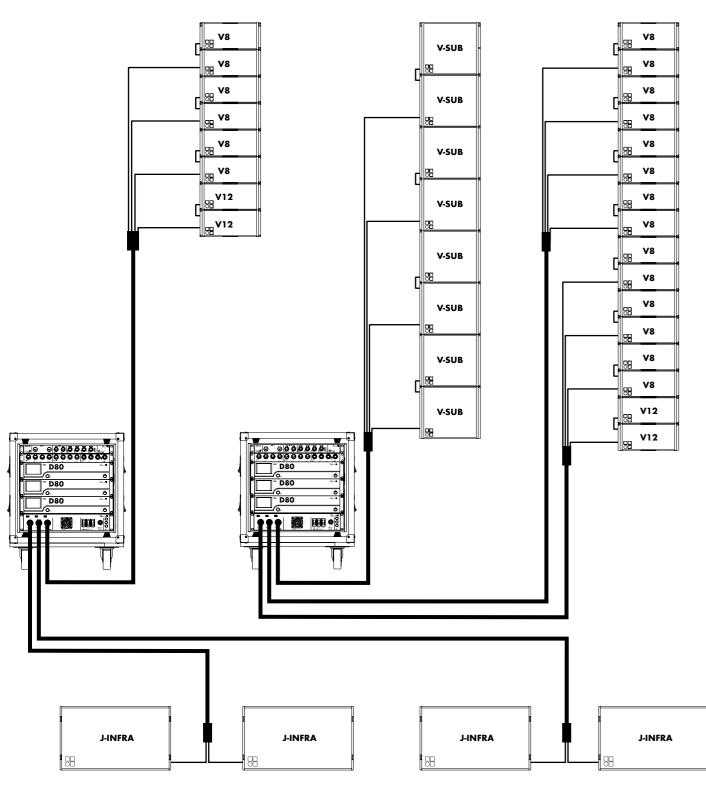


V-Series L/R configuration with V8/V12 flown line array and ground stacked V-SUBs with D80 Touring rack

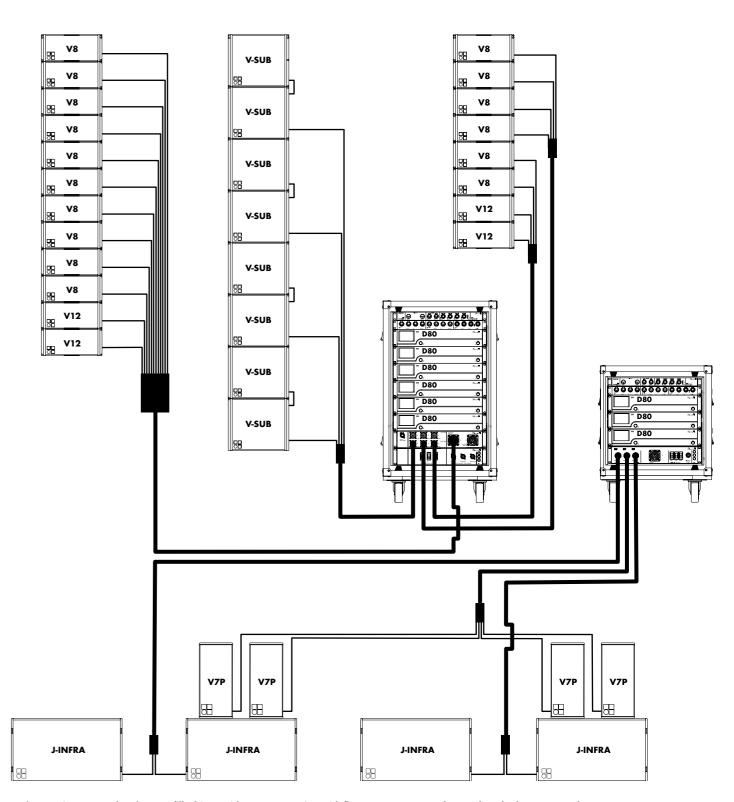


Vi line array in L/R configuration with flown Vi8/Vi12s with ground stacked Vi-SUBs with 30D amplifiers in Dual Channel mode

## The V-Series configuration examples with ArrayProcessing



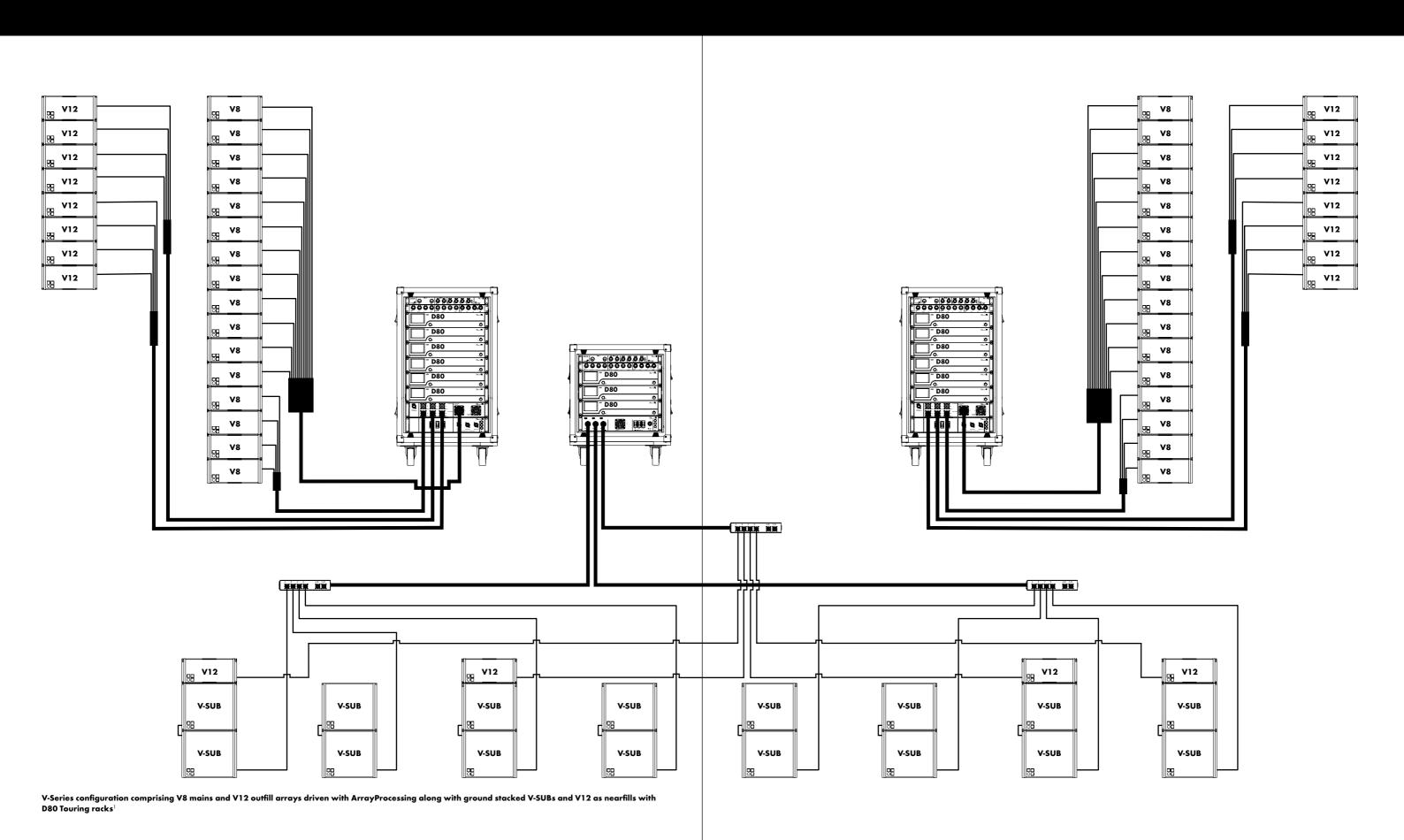
V8/V12 and V-SUB main arrays, V8/V12 outfills and ground stacked J-INFRAs with D80 Touring racks<sup>1</sup>



V8/V12 main array and V8/V12 outfills driven with ArrayProcessing with flown V-SUB array and ground stacked J-INFRAs and V7P nearfills with D80 Touring racks<sup>1</sup>

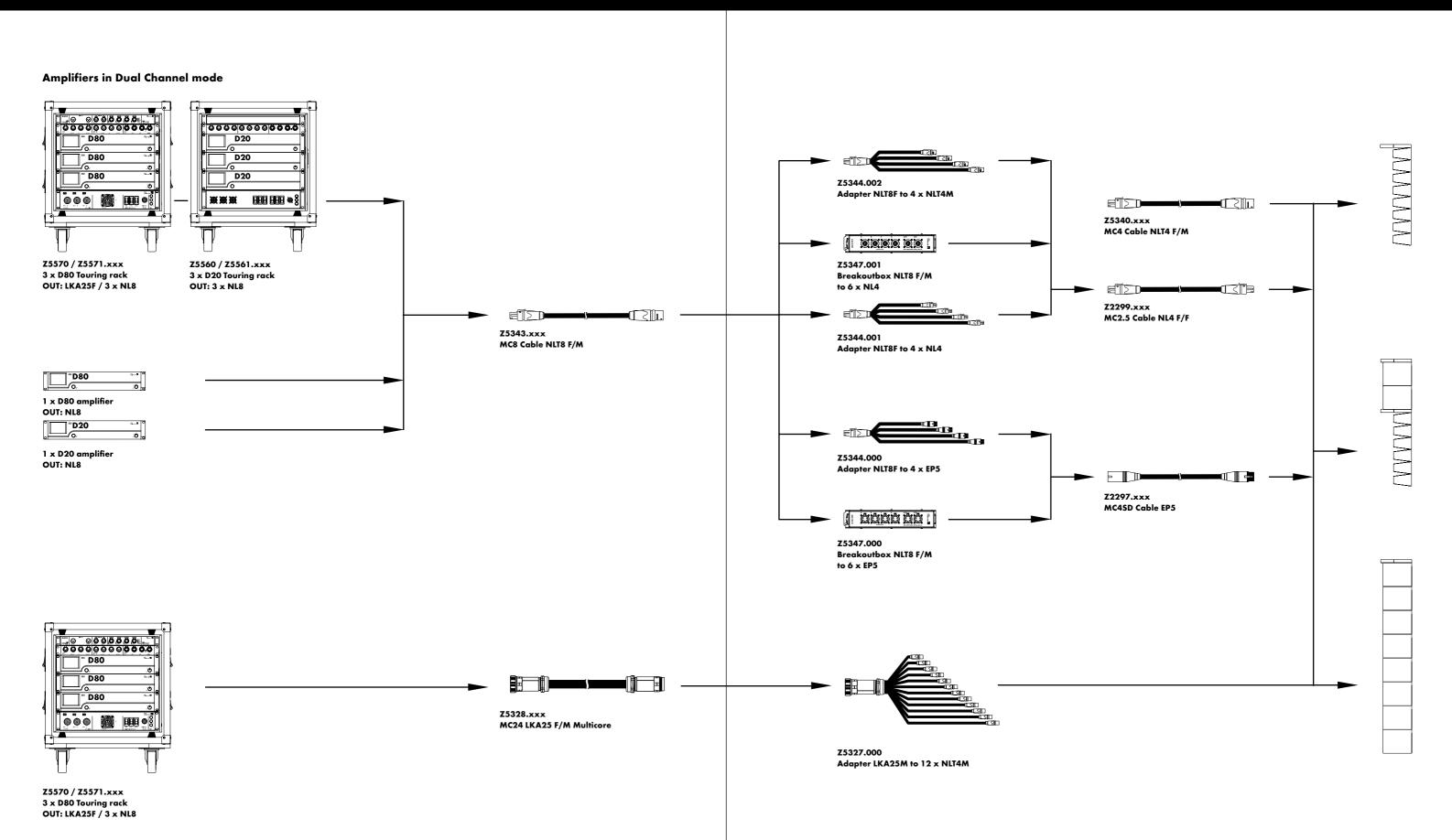
38 d&b V-Series <sup>1</sup> These configurations are also valid for Vi loudspeakers <sup>2</sup> d&b V-Series 39

## The V-Series configuration examples with ArrayProcessing

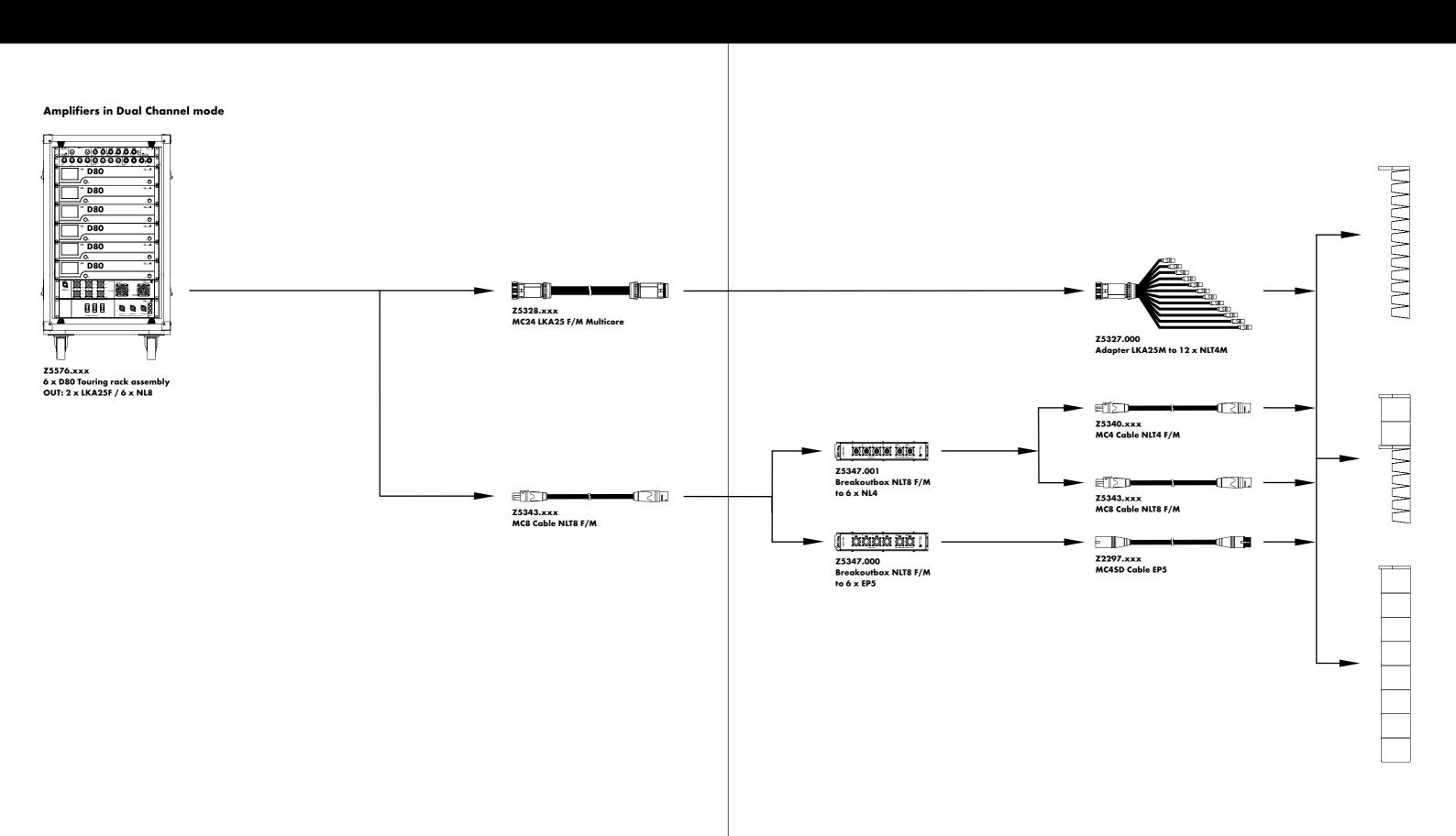


40 d&b V-Series 1 These configurations are also valid for Vi loudspeakers 41

### The V-Series cables and adapters MC8 / MC24



### The V-Series cables and adapters MC8 / MC24



### The V-Series product overview

V loudspeakers	Z0704.xxx	V7P loudspeaker
· ioouspounois	Z0705.xxx	V10P loudspeaker
	Z0515.xxx	V8 loudspeaker
	Z0516.xxx	V12 loudspeaker
	Z0518.xxx	V subwoofer
	Z0519.xxx	V-GSUB
	200171000	
Loudspeaker	Zxxxx.000	EP5 connector
connector options	Zxxxx.001	NL4 connector
	Zxxxx.002	NLT4 F/M connector
Vi loudspeakers	Z0724.001	Vi7P loudspeaker NL4 connector
	Z0725.001	Vi10P loudspeaker NL4 connector
	Z0535.001	Vi8 loudspeaker NL4 connector
	Z0536.001	Vi12 loudspeaker NL4 connector
	Z0538.001	Vi subwoofer NL4 connector
	Z0520.001	Vi-GSUB NL4 connector
		WR Weather Resistant option
		SC Special Colour option <sup>2</sup>
		se special colour opnon
Loudspeaker cases	E7462.000	Touring case 2 x V8/V12
	E7465.000	Touring case 2 x V Flying frame
	E7466.000	Touring case 2 x V7P/V10P
Loudspeaker carts	E7463.000	Touring cart 4 x V8/V12
	E7464.000	Touring cart 8 x V8/V12
Lids	E7923.000	V-SUB Wooden lid
	E7926.000	V-GSUB Wooden lid
V/Vi accessories	Z5380.000	<b>V Flying frame</b> <sup>3</sup> (supplied with Z5382 V Safety chainset)
	Z5381.000	V Hoist connector chain
	Z5382.000	V Safety chainset
V accessories	Z5385.000	V Flying adapter
	Z5386.000	V Stack adapter
	Z5147.000	Rota clamp
Vi accessories	Z5387.000	Vi Mounting frame top <sup>3</sup>
	Z5387.001	Vi Mounting frame bottom <sup>3</sup>
	E6507.000	1t Shackle

Amplifiers	Z2710.xxx Z2770.xxx Z2750.xxx	D80 amplifier <sup>4</sup> 30D amplifier <sup>5</sup> D20 amplifier <sup>4</sup>
Processing and distribution	Z4010.000	DS10 Audio network bridge
	Z4011.000	DS20 Audio network bridge
	Z4100.000	DS100 Signal Engine
Amplifier rack assemblies	Z5560.xxx	3 x D20 Touring rack <sup>6</sup>
_	Z5561.xxx	3 x D20 Touring rack (includes DS10) <sup>6</sup>
	Z5570.xxx	3 x D80 Touring rack <sup>6</sup>
	Z5571.xxx	3 x D80 Touring rack (includes DS10) <sup>6</sup>
	Z5576.xxx	6 x D80 Touring rack (includes DS10) <sup>6</sup>
Racks	E7480.000	D20 Touring rack 2 RU, 19" SD, shock mounted, handles
	E7468.000	D80 Touring rack 2 RU, 19" SD, shock mounted, handles
	E7483.000	DS100 Touring rack 3 RU, 19" SD, shock mounted, handles
Cables and adapters	Z5339.000	Multichannel extension cable
	Z5343.xxx	MC8 Cable NLT8 F/M
	Z5345.001	Adapter 4 x NL4 to NLT8M
	Z5344.002	Adapter NLT8F to 4 x NLT4M
	Z5344.001	Adapter NLT8F to 4 x NL4
	Z5344.000	Adapter NLT8F to 4 x EP5
	Z5347.001	Breakoutbox NLT8 F/M to 6 x NL4
	Z5347.000	Breakoutbox NLT8 F/M to 6 x EP5
	Z5340.xxx	MC4 Cable NLT4 F/M
	Z5328.xxx	MC24 LKA 25 F/M Multicore
	Z5327.000	Adapter LKA25M to 12 x NLT4M
	Z2299.xxx	MC2.5 Cable NL4 F/F
	Z5763.000	WR 5,5m cable 2x2.5mm <sup>2</sup>
Alignment tools	Z5710.002	d&b ArraySight set V Series

Z5383.000

Z5384.000

Z5388.000

Z5551.000

Z5550.000 Z5010.000

Z5012.500

Z5049.000

Z5013.000

Z5009.000

Z5024.000

**VP Mounting bracket**<sup>3</sup>

**VP Horizontal bracket**<sup>3</sup>

VP Flying adapter link M20 Stand adapter

TV Spigot with fixing plate

Loudspeaker stand with winder

Loudspeaker stand adapter

**Pipe clamp for TV Spigot** 

M20 pole with winder

VP Flying adapter<sup>3</sup>

Flying pin 8mm

 $^4$   $\,$  The complete list of mobile amplifier versions is available in the d&b D Amplifier and Software brochure

**VP** accessories

<sup>7</sup> Other lengths on request d&b V-Series 47

<sup>&</sup>lt;sup>1</sup> WR only for Vi loudspeakers, on request

<sup>&</sup>lt;sup>2</sup> SC only for Vi loudspeakers

<sup>3</sup> SC on request

The complete list of installation amplifier versions is available in the d&b xD Installation Amplifier and Software brochure

<sup>&</sup>lt;sup>6</sup> Further information is available in the d&b D Amplifier and Software brochure

